What is claimed is

1. A process for producing a foamed article of a thermoplastic resin composition by causing the said resin composition to foam up in a cavity of a mold, comprising

a primary injection step in which a part amount of the thermoplastic resin composition is injected into the mold cavity defined by a stationary mold element and a movable mold element settled at a position confining the mold cavity to a smaller volume than the total volume of the thermoplastic resin composition necessary for making up the complete foamed article, while imposing a clamping pressure on the movable mold element so as to settle it at the said position,

a secondary injection step subsequent to the primary injection step, in which the residual amount of the thermoplastic resin composition is further injected into the mold cavity, while drawing the movable mold element back from the position settled for the primary injection step so as to increase the cavity volume, and

a foaming step subsequent to the secondary injection step, in which injection of the thermoplastic resin composition is stopped and the movable mold element is further drawn back so as to permit the thermoplastic resin composition to foam up,

wherein the thickness L_o of the mold cavity at the start of the primary injection step is in the range from 1.0 to 1.5 mm, the injection time of the primary

imposed on the movable mold element in the primary injection step is in the range from 5 to 20 MPa with respect to the sectional area of the mold cavity in the projection onto the mold base plane.

2. The process as claimed in claim 1, wherein the ratio of the thickness L_0 of the mold cavity at the start of the primary injection step relative to the thickness L_1 at the end of the secondary injection step, namely, L_0/L_1, is in the range from 0.3 to 1.0.

3. The process as claimed in claim 1 or 2, wherein the recession of the movable mold element subsequent to the secondary injection step begins within 5 seconds from the termination of the secondary injection step.

4. The process as claimed in any one of claims 1 to 3, which comprises further a step of compressing the foamed article, in which the movable mold element is pressed onto the foamed article within 60 seconds from the termination of the foaming step.

5. The process as claimed in any one of claims 1 to 4, wherein the thermoplastic resin composition comprises a polyolefin resin and a foaming agent.

6. The process as claimed in claim 5, wherein the polyolefin resin is a polypropylene resin.

7. The process as claimed in claim 5 or 6, wherein the polyolefin resin has a melt flow rate, determined according to ASTM D 1238 at 230 °C under a load of 2.16 kg, in the range from 30 to 200 g/10 min.

8. A foamed article of a thermoplastic resin composition, which is produced by the process as claimed in any one of claims 1 to 7.

9. The foamed article as claimed in claim 8, wherein the solid skin layer has a thickness in the range from 0.1 to 0.7 mm.

10. The foamed article as claimed in claim 8 or 9, wherein the foaming expansion ratio is in the range from 1.05 to 5 times of the non-expanded original volume.

11. Automotive parts as foamed articles, which are produced by the process as claimed in any one of claims 1 to 7.